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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,916	12/24/2003	Chean-Lung Tsay	MR2707-53	9178
4586	7590	07/13/2005	EXAMINER	
ROSENBERG, KLEIN & LEE 3458 ELLICOTT CENTER DRIVE-SUITE 101 ELLICOTT CITY, MD 21043			A, MINH D	
			ART UNIT	PAPER NUMBER
			2821	
DATE MAILED: 07/13/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/743,916

Applicant(s)

TSAY ET AL.

Examiner

Minh D. A

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-14 is/are allowed.
- 6) ☒ Claim(s) 15-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 15-17 are rejected under 35 U.S.C. 103(a) as being anticipated by Yu (US 6,750,842) in view of Strand et al (US 2001/0036094).

Regarding claim 15, Yu discloses a back-light control circuit of multi-lamps liquid crystal display driving method comprising a transformer (324) for transforming a phase AC voltage to a phase AC current by a transformer. However, Yu does not disclose each by one phase of said three-phase AC current and generating a three-phase AC voltage by a three-phase inverter;

Strand discloses each by one phase of said three-phase AC current and generating a three-phase AC voltage by a three-phase inverter (10). See figures 1-3, col.2, lines [0033] to lines [0035] to col.4, lines [0036] to lines [0037].

It would have been an obvious to one of ordinary skill in the art at the time the invention was made to employ a three phase converter such as that suggested by Strand in system of circuit of Yu to provide a high efficiency controller circuit for regulating a power delivered to each load, since it obtains a optimal operation for various LCD panel load and improving the reliability of the system.

Regarding claim 16, Yu and Strands do not disclose a modulators for modulating three-phase voltage to have a phase difference of 120 degrees between each two phases thereof and modulating said three-phase current to have a phase difference of 120 degrees between each two phases thereof. It would have been an obvious matter of design choice to employ Yu and Strand in any desired interest area in order to maximize the usage of his invention, since applicant does not disclose that, all of these limitations can solve any stated problem and for any particular purpose. Therefore, it appears that the invention would not provide any improvement but merely apply the invention in different presentation.

Allowable Subject Matter

3. Claims 1-14 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art does not teach that, a three-phase Inverter comprising: a third low-side switch connected between said third node and said reference voltage; and a three-phase transformer having a primary side with three terminals connected with said first, second and third nodes, respectively, and a secondary side with three terminals connected with a first, second and third loadings, respectively; wherein said switches are switched for generating a first AC voltage between said first and second nodes, a second AC voltage between said second and third nodes, and a third AC voltage between said third and first nodes, respectively, so as to be transformed by said

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three-phase transformer to generate a first AC current for said first loading, a second AC current for said second loading, and a third AC current for said third loading recited all limitations recited in independent claims 1 and 11.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lo et al (US 5,132,888) and Hitchcock et al (US 5,132,888) recite a high efficiency converter system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Minh A whose telephone number is (571) 272-1817. The examiner can normally be reached on M-F (5:30 –2:30 PM).

If attempts to reach the examiner by telephone is unsuccessful, the examiner's supervisor, Don Wong, can be reached on (571) 272-1834. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and (703) 872-9319 for final communications.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center receptionist whose telephone number is (571) 272-1553.

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Examiner

Minh A

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7/10/05

A handwritten signature in black ink, appearing to read 'Wilson Lee', written in a cursive style.

WILSON LEE
PRIMARY EXAMINER